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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,257	01/13/2005	Holger Monch	DE 020178	8665

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EXAMINER	
KARIMI, PEGEMAN	
ART UNIT	PAPER NUMBER
2629	
MAIL DATE	DELIVERY MODE
12/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/521,257	MONCH, HOLGER	
	Examiner	Art Unit	
	Pegeman Karimi	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/12/2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 October 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 10/12/2007 has been entered and considered by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1 and 3 are rejected under 35 U.S.C. 102(a) as being anticipated by Luerkens (U.S. Pub. No. 2003/0020412).

As to claim 1, Luerkens teaches a projection system (420) comprising:

a projection display (426),

at least one light source (422); and

a sensor means (130) for sensing and compensating for changes in the luminous flux (quantity of light) emitted by the at least one light source ([0008], lines 22-28; [0031], lines 1-3), wherein light emitted from the at least one light source (light emitting from lamp 422) comprises:

a first and a second spatial component (423 and 425a) which impinge on an entering face of an optical component of the projection system (425b; 423 and 425a have an effect on the light beam from the light source, which is then guided toward an optical component, Fig. 2) and a third spatial component (424) which is directed into a

region immediately surrounding the entering face (the image generator, 424, which guides the beam from the light source immediately to an optical component, where it surrounds the entering face of optical component 425a), and wherein the sensor means (130) comprises at least one sensor arrangement (sensor is located adjacent to the spatial component) for sensing the third spatial component of the light from the light source ([0042], lines 1-6) that is directed into the region immediately surrounding the entering face of the optical component of the projection system (component 424, which has a sensor to immediately sense a quantity of light surrounds the optical component 425a).

As to claim 3, Luerkens teaches a power supply unit (410) of the at least one light source (422), wherein the power supply unit is controlled by the sensor arrangement to compensate for the fluctuations in the luminous flux ([0030], lines 1-6).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luerkens in view of Allen (U.S. Pub. No. 2003/0179192).

As to claim 2, Note the discussion of Luerkens above. Luerkens does not mention driver means for projection display. Allen teaches a driver means (14, Fig. 1)

for driving the projection display (54), wherein the driver means is controlled by the sensor arrangement (18) to compensate for fluctuations in the luminous flux ([0021]). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the display controller of Allen to the projection display system of Luerkens because the controller may sequence light sources and may control the display 40 so as to have them cooperate [0019], lines 17-20; also the controller in response to ambient light information, modifies the sequence of light sources and the operation of the display 54 to adjust the display of image 52 [0021], lines 9-11).

As to claim 9, Luerkens teaches one high-pressure gas-discharge lamp ([0008], lines 11-12) operated by alternating current ([0031], lines 5-8 and [0033], lines 1-3).

Luerkens does not teach a color display for sequential color representation. Allen teaches a color display (54, [0022], lines 9-10) for sequential color representation and, as a light source ([0019], lines 16-20).

6. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luerkens in view of Anderson (U.S. Patent No. 6,188,427).

As to claim 4, Luerkens does not teach the sensor arrangement being formed by a plurality of sensors that are arranged along the circumference of the optical component. Anderson teaches the sensor arrangement comprises a plurality of sensors (30, Fig. 1) arranged proximate the entering face (the sensors are close to the entering face 22) and along the circumference of the optical component (sensors are located

around the circumference of optical component 22) and wherein the plurality of sensors are directed at the light source (col. 6, lines 37-39). Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to have added the plurality of sensors of Anderson to the projection system of Luerkens because zones of pixels which are characterized as reflecting a lower combined light output as detected by sensor 30 can be utilized to determine which corresponding light emitting elements are deficient in light output. The drive current provided to each of these light emitting elements is adjusted accordingly until the light sensor 30 detects a proper intensity of light (col. 6, lines 44-49).

As to claim 5, Luerkens teaches a third spatial component (424) of light from the light source (light guided from the light source 422 to the element 424, which is captured by brightness sensor 130).

Anderson teaches the sensor arrangement (30) comprises:

an optical waveguide structure (light (as a wave) is guided through the sensor 30 to be measured), proximate to (sensors 30 are close to the entrance of element 22) and surrounding the entering face of the optical component (sensors are located around the circumference of optical component 22), to couple in incident light from the light source (12, col. 5, lines 61-67 and col. 6, lines 1-2), and at least one sensor to sense the light that is coupled in (sensor 30 at position B senses the light that is coupled in projection lens 22, Fig. 1).

As to claim 6, Luerkens teaches a third spatial component (424) of light coming from the light source (light guided from the light source 422 to the element 424, which is captured by brightness sensor 130)

Anderson teaches the sensor (30) arrangement comprises:

a surface (20), proximate to (the surface is in approximate of sensor 30) and surrounding the entering face of the optical component (the surface 20 surrounds the entrance face of element 20, where light beam from light array 12 reflects back toward element 20 by the surface), to scatter incident light coming from the light source (the spatial light modulator, 20, reflects light coming from light array 12, Fig. 2), and a sensor to sense the light that is scattered (sensors 30 sense the scattered light that is reflected by the surface 20).

As to claim 7, Anderson teaches wherein further the sensor (30) is arranged substantially next to the light source (Fig. 1, the sensors 30 are in close proximity of light source array 12) in a direction perpendicular to the direction of propagation of the light produced by the light source (it can be seen from Fig. 2, sensor 30 is located perpendicular to the light beam (i.e. modulated light from "on-state".)

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Luerkens in view of Morgan (U.S. Pub. No. 2003/0227465).

As to claim 8, Luerkens teaches a first and a second spatial component (423 and 425a) which impinge on an entering face of an optical component of the projection

system (425b; 423 and 425a have an effect on the light beam from the light source, which is then guided toward an optical component, Fig. 2)

Luerkens does not mention a rod integrator for homogenizing the light produced by the light source. Morgan teaches an optical component (Optical component of Fig. 25) comprises:

a rod integrator (112) for homogenizing light produced by the light source which impinge on the entering face of the optical component (110, Fig. 25 clearly shows the light from lamp is homogenized by the resonator rod 112 and a straight illumination light exists toward the optical component element 114). Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to have added the resonator rod of Morgan to the projection device of Luerkens because an optical resonator rod can capture the light that is reflected back ([0067], lines 3-5).

Response to Arguments

8. Applicant's arguments, see page 10, paragraph 1, lines 3-6, filed on 10/12/2007, with respect to rejection(s) of claim 1 under 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of new reference of Luerkens (U.S. Pub. No. 2003/0020412).

On page 10, lines 2-3, applicant argues that Kavanagh does not disclose a "sensor means for sensing and compensating for changes in the luminous flux". In view of amendment of claims 1-9, the new reference of Luerkens has been used for new

ground of rejections. Luerkens mentions the brightness sensor catches the quantity of light incident on the image generator and the electronic circuit in the projector accordingly ensures that the image generator is illustrated only with light of constant brightness and the image generator is not subject to brightness fluctuations. ([0042]).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiry

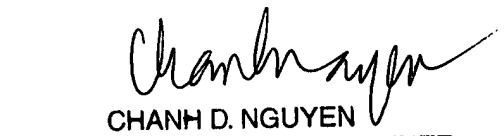
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegeman Karimi whose telephone number is (571) 270-

1712 and direct fax number is (571) 270-2712. The examiner can normally be reached on Monday-Thursday 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pegeman Karimi
December 22, 2007



CHANH D. NGUYEN
SUPERVISORY PATENT EXAMINER